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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/000,187

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Stephen Staphanos

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10/04/2004

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EXAMINER

JACKSON, ANDRE K

ART UNIT

PAPER NUMBER

2856

DATE MAILED: 10/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary**Application No.**

10/000,187

Applicant(s)

STAPHANOS, STEPHEN

Examiner

André K. Jackson

Art Unit

2856

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 July 2004.
 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-3,5-9,12 and 13 is/are pending in the application.
 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
 5) ☐ Claim(s) _____ is/are allowed.
 6) ☒ Claim(s) 1-3,5-9,12 and 13 is/are rejected.
 7) ☐ Claim(s) _____ is/are objected to.
 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 a) ☐ All b) ☐ Some * c) ☐ None of:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
 3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
 Paper No(s)/Mail Date _____.
 4) ☐ Interview Summary (PTO-413)
 Paper No(s)/Mail Date _____.
 5) ☐ Notice of Informal Patent Application (PTO-152)
 6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

2. Claims 12 and 13 are rejected under 35 U.S.C. 102(b) as being anticipated by Teal et al.

Regarding claim 12, Teal et al. disclose a receiving a sample specimen at a sample stream at a pre-selected flow rate (syringe, 23), receiving a carbon free gas at a pre-selected flow rate (Claim 1); conveying the sample stream and gas through a combustion furnace to oxidize the sample stream (Figure 1) and measuring a quantity of carbon dioxide generated by the combustion furnace (7).

Regarding claim 13, Teal et al. disclose where cooling the oxidized sample stream prior to the step of measuring the carbon dioxide quantity (Figure 1).

Claim Rejections - 35 USC § 103

3. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.
4. Claims 1-3, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teal et al. in view of Itoh.

Regarding claim 1, Teal et al. disclose in the patent entitled "Method and apparatus for determining the total carbon content of aqueous systems" a sample inlet (3), gas inlet (20) a sample stream flow controller (syringe, 23), a gas flow controller (8) a combustion furnace (24) coupled to the sample stream flow controller to receive continuous flow of sample stream and gas the furnace being maintained at a temperature in excess of 680°C, a chiller (5) coupled to the furnace to receive the oxidized material and a detector (7) coupled to the chiller (Figure 1). Teal et al. do not disclose where the flow controller is a metering pump. However, Itoh discloses in the patent entitled "Analytical method for the determination of nitrogen, carbon, hydrogen and sulfur or chlorine and apparatus therefore" where the gas stream has a pump along with a metering device (37), which distributes the gas in a metered manner. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Teal et al. to include where the flow controller includes a metering device. By adding this feature the user would be able to precisely distribute the sample.

Regarding claim 2, Teal et al. disclose a catalyst disposed in the combustion furnace (Column 4).

Regarding claim 3, Teal et al. disclose where the catalyst is a platinum based catalyst (Column 2).

Regarding claim 7, Teal et al. disclose a cooling means (5), which performs the same function as the claimed thermoelectric chiller.

5. Claims 5 and 6 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teal et al. in view of Itoh and in further view of Parth et al.

Regarding claims 5 and 6, neither Teal et al. nor Itoh disclose where the metering pump provides a sample flow in the range of approximately 0.5 cc per minute to approximately 2.0 cc per minute. However, Parth et al. disclose where the constant flow rate is 120 cc per second (Column 4). Parth et al. do not disclose 0.5 cc per minute but the skilled artisan would be able to adjust the flow rate without undue experimentation. Therefore, it is well within the purview of the skilled artisan to modify Teal et al. at the time of the invention to include where the metering pump provides a sample flow in the range of approximately 0.5 cc per minute to approximately 2.0 cc per minute since this would provide the instrument with an accurate amount of sample flow during measurement.

6. Claims 8 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Teal et al. in view Itoh and further in view of Furlong et al.

Regarding claim 8, neither Teal et al. nor Itoh disclose where the detector is a non-dispersive infrared detector. However, Furlong et al. disclose in the patent entitled "Selection of a TOC analyzer: analytical considerations " a non-dispersive infrared detector. Therefore, to modify Teal et al. to include a non-dispersive infrared detector would have been clearly within the purview of the skilled artisan since the sensitivity of the instrument is enough to detect both carbon monoxide and carbon dioxide.

Regarding claim 9, neither Teal et al. nor Itoh disclose where the non-dispersive infrared detector outputs a measurement of carbon dioxide in the zero to 100 ppm range. However, Furlong et al. disclose where the non-dispersive infrared detector outputs a measurement of carbon dioxide in the zero to 100 ppm range (Page 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to modify Teal et al. to include where the non dispersive infrared detector outputs a measurement of carbon dioxide in the zero to 100 ppm range since this gives the detector a wider range of detecting ability.

Response to Arguments

7. Applicant's arguments with respect to claims 1-3,5-9,12 and 13 have been considered but are moot in view of the new ground of rejection.


8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to André K. Jackson whose telephone number is (571) 272-2196. The examiner can normally be reached on Mon.-Thurs. 7AM-4PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on (571) 272-2208. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

A.J.

September 30, 2004


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800